

USSR

MARCHUK, G. I., Academician, and ATANBAYEV, S. A., Computer Center of the Siberian Department of the Academy of Sciences USSR, Novosibirsk

"Certain Problems in 'Global' Regularization"

Moscow, Doklady Akademii Nauk SSSR, Vol. 190, No. 3, 1970, pp 527-530

Abstract: If G is an m -dimensional region with boundary Γ_0 and $L_2(G)$ denotes the space of all functions squared and summed over the region G with the norm

$$\|u\|^2 = \iint \dots \int |u|^2 dx, \quad u = u(x, t), \quad x = (x_1, x_2, \dots, x_m), \quad 0 \leq t \leq T,$$

the following problem is considered in the region $\Omega = G \times [0, T]$ with the end surface $\Gamma = \Gamma_0 \times [0, T]$

$$\partial u / \partial t = \mathcal{L}u, \quad (1)$$

$$u(x, 0) = u_0(x), \quad x \in G, \quad (2)$$

where \mathcal{L} is a linear, positive, definite differential operator of (2) of the $(s-1)$

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order and self-conjugate under the boundary conditions

$$\mathcal{L}_1(u) = \mathcal{L}_2(u) = \dots = \mathcal{L}_{n-1}(u) = 0. \quad (3)$$

This problem is correct in the Tikhonov sense in a class of solutions linearly bounded with respect to t in the metric $L_2(G)$. An approximate solution of the problem (1)-(3) has been made using a local method of calculation in which equation (1) is replaced by the difference equation

$$(u^k - u^{k-1}) / \Delta t = \mathcal{L}u^{k-1}, \quad (4)$$

where $\Delta t = T/M$, $u^k = u(x, k\Delta t)$ ($k = 1, 2, \dots, M$), and equation (4) is solved for each fixed k . In this article, a global method of calculating is used to find a solution, and the idea of this method is the following: Assume that a difference net is introduced into the region G with uniform steps h_i ($i = 1, 2, \dots, \dots, m$). Equation (1) is replaced by the difference equation

$$(u^k - u^{k-1}) / \Delta t = \beta \mathcal{L}_A u^k + (1 - \beta) \mathcal{L}_A u^{k-1} \quad (0 < \beta \leq 1),$$

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and the difference equation is written for all internal intersections of the grid for all times in the interval $0 \leq t \leq T$. With boundary conditions (3), this reduces to solving the system of linear algebraic equations

$$A\phi = f, \quad (5)$$

where A is a quadratic matrix and ϕ and f are the grid vector functions. Assuming equation (5) exists and symmetrizing the equation, one obtains

$$A\phi = \bar{f}, \quad (6)$$

where $\Lambda = \begin{pmatrix} 0 & A \\ A^* & 0 \end{pmatrix}$, $\varphi = \{\varphi^*, \varphi\}$, $f = \{f, f^*\}$, f is a certain vector function. A method is given to accelerate the convergence of the approximate solution of equation (6) to the solution of the problem (1)-(3).

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1/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--DECODING COORDINATES IN CONVERTER TYPE PERMANENT STORAGE UNITS -U-
AUTHOR--ATANELISHVILI, I.G. A
COUNTRY OF INFO--USSR
SOURCE--LENINGRAD, IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY.
PRIBOROSTROYENIYE, NO 2, 1970, PP. 48-50
DATE PUBLISHED-----70
SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.
TOPIC TAGS--COMPUTER STORAGE DEVICE, DECODING COMPUTER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1692 STEP NO--UR/0146/70/000/002/0048/0050
CIRC ACCESSION NO--AT0123516
UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AT0123516
ABSTRACT/EXTRACT--(U) GP-D- ABSTRACT. THE POSSIBILITY OF INTRODUCING TWO
NEW (FIFTH AND SIXTH) DECODING COORDINATES INTO CONVERTER TYPE PERMANENT
STORAGE UNITS IS INVESTIGATED. INTRODUCTION OF NEW DECODING COORDINATES
RESULTS IN SIMPLIFICATION OF THE ADDRESS SECTION OF PERMANENT STORAGE
UNITS. FACILITY: GEORGIAN POLYTECHNIC INSTITUTE GRUZINSKIY
POLITEKHNICHESKIY INSTITUT.

UNCLASSIFIED

USSR

UDC 532.51:518.5

ATANOV, G. A., Donetsk

"Numerical Investigation of the Supersonic Flow in a Hydraulic Gun"

Moscow, Izvestiya Akademii Nauk USSR, Mekhanika Zhidkosti i Gaza, No 1, Jan-Feb 73, pp 155-158

Abstract: The supersonic flow in a hydraulic gun was investigated by the numerical method of characteristics with timed fixed pitch. The flow is described by functions of gas dynamics in quasi-univariate formulation. Some presented results of calculations are discussed by reference to diagrams. Flow characteristics, particularly the development of splittings-off, are indicated. In comparison with a stationary outflow, minor pressure values are required to obtain a specific efflux velocity. Reasons are given for the principal advantage of producing super-jets by means of a hydraulic gun, in comparison with a pulsed water jet. Five figures, eleven formulas, five bibliographic references.

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ATANOV, P. K., KATMAN, A. K., VASIL'YEV, G. F., SAPRONOV, V. I., SILANT'YEV, P. P.

"Single-Pole Transistor Flip-Flop"

USSR Authors' Certificate No 250997, Filed 14 May 1968, Published 3 January 1970 (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, 1970, Abstract No 10B110P, by N. V.)

Translation: The flip-flop suggested differs in that the load resistors are connected in series with the source-drain junctions of blocking single-pole transistors, the gates of which are combined and connected to the control input. The substrate of the blocking transistors is isolated from the substrate of the remaining flip-flop circuit. This allows the speed of the flip-flop to be increased while decreasing the dissipated power. One illustration.

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621.317.335:621.317.738:531.787.084.2

ATANOV, YUL. A., VORZUNOV, V. A.

"Dielectric High Pressure Transducer"

Tr. Metrol. In-Tov SSSR, Vyp. 104(164), [Works of Metrological Institutes of USSR, No. 104(164)], pp 53-55 (translated from Referativnyy Zhurnal Metrologiya I Izmeritel'naya Tekhnika, No. 4, 1970, Abstract No. 4.32.725, unsigned)

Translation: The design of a high pressure transducer consisting of a coaxial cylindrical condenser filled with the manometric fluid is described. Recording of pressures is based on the change in dielectric permiability of the fluid with pressure. In contrast to ordinary capacitive transducers, this dielectric transducer has no elastic metal membrane and can be used for measurement of high pressures on the order of 10,000 kg/cm² and higher. The dependence of the electrical capacitants of the transducer on pressure is established as a result of calibration using an absolute piston manometer. Non-polar or slightly polar fluids having low temperature coefficient of dielectric permiability are recommended for usage as manometric fluids. The transducer can be used in systems for automatic pressure regulation, since the output parameter -- electrical capacitance -- is used in high-sensitivity resonance devices. One illustration, four biblio. refs.
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USSR

UDC: 531.787

ATANOV, Yu. A., IVANOVA, Ye. M.

"Study of Manganin Resistance Manometers at High Pressures"

Tr. VNII Fiz.-Tekhn. i Radiotekhn. Izmereniy [Works of All Union Scientific Research Institute for Physical-Technical and Electronic Measurements], No 5 (35), 1971, pp 52-69 (translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 2, 1972, Abstract No 2.32.686)

Translation: Results are presented from studies of the metrological characteristics of a large group of identical manganin resistance manometers. An interpolation equation is produced, correct for any manometer of the group in the pressure interval up to 15,000 kg/cm² with an error on the order of $\pm 0.5\%$. It is demonstrated that one-time pressing of coils with a pressure on the order of 28,000 kg/cm² reduces the spread of pressure resistance coefficients by a factor of 2. A number of manometers are cross checked at a pressure on the order of 28,000 kg/cm². 4 figures; 4 tables; 3 biblio refs.

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1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--OUTPUT CHARACTERISTICS OF AN ALLOYED JUNCTION TRANSISTOR BASED ON N
INDIUM ANTIMONIDE AT 78DEGREESK -U-
AUTHOR-(03)-GALAVANOV, V.V., RAVKOV, A.V., ATARBKOV, S.G.

COUNTRY OF INFO--USSR

SOURCE--RADIOTEKH. ELEKTRON. 1970, 15(4), 868

DATE PUBLISHED-----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS, MECH., IND.,
CIVIL AND MARINE ENGR
TOPIC TAGS--ALLOY TRANSISTOR, JUNCTION TRANSISTOR, INDIUM ANTIMONIDE,
MANUFACTURING PROCESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/2186

STEP NO--UR/0109/70/015/004/0868/0868

CIRC ACCESSION NO--AP0125766

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSIGN NO--AP0125766

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD OF PREPN. IS DESCRIBED,
AND THE OUTPUT CHARACTERISTICS ARE GIVEN OF AN ALLOYED JUNCTION
TRANSISTOR BASED ON N INSB. FACILITY: FIZ.-TEKH. INST. IM.
IOFFE, LENINGRAD, USSR.

UNCLASSIFIED

1/2 008 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ANALOGS OF GASTRIN TETRAPEPTIDE WITH A MODIFIED RESIDUE OF
TRYPTOPHAN -U-
AUTHOR--(031)-CIPENS, G., VILKA, V., ATARE, Z.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PRIR. SOEDIN. 1970, 6(1), 117-19
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TRYPTOPHAN, FRACTIONATION, PEPTIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/0553 STEP NO--UR/0393/70/006/001/0117/0119
CIRC ACCESSION NO--AP0131176
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131176

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANALOGS OF GASTRIN TETRAPEPTIDE TRY-MET-ASP-PHE-NH SUB2 WERE PREPD. BY SUBSTITUTION OF TRYPTOPHAN RESIDUE BY 1-NAPHTHYLPROPIONIC ACID (I), 2-NAPHTHYLPROPIONIC ACID, (II), NAPHTHYLACRYLIC (III), AND METHYLINDOLYLAMINOPROPIONIC (IV) ACIDS. I AND III WERE COMPLETELY INACTIVE, WHILE II AND IV STIMULATED THE GASTRIC SECRETION TO THE SAME DEGREE AS THE ORIGINAL TETRAPEPTIDE. THE INTERACTION OF THE ACTIVE SITE OF GASTRIN WITH THE RECEPTOR ON THE BASIS OF ELECTROKINETIC FORCES IS POSTULATED. FACILITY: INST. ORG. SIN., RIGA, USSR.

UNCLASSIFIED

USSR

UDC 547.26'118

ATAVIN, A. S., TROFIMOV, B. A., GAVRILOVA, G. M., and KORATAYEVA, I. M.
Irkutsk Institute of Organic Chemistry, Siberian Branch, Acad. Sc. USSR

"Cyclization Occurring During Homolytic Addition of Dialkyl Phosphites to
Divinyl Ethers of vic-Diols"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 4, Apr 71, pp 804-810

Abstract: It has been shown that dialkyl phosphites reacted with divinyl ethers of ethylene glycol, 1,2-propylene glycol, and 2,3-butylene glycol in presence of benzoyl or tert-butyl peroxides or azoisobutyronitrile produce methyl substituted 2-(dialkylphosphonemethyl)-1,4-dioxanes rather than the expected β -alkoxyethyl phosphates. In addition to these 1:1 cyclic addition products, phosphorus-containing oligomers were obtained in 35-100% yield, depending on the ratio of the reagents. In general, the main course of the addition of dialkyl phosphites to divinyl ethers of vicinal diols under homolytic conditions is the telomerization of ethers.

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Acc. Nr.

AP0053454

Abstracting Service:

CHEMICAL ABST.

Ref. Code:

4R0366

110704b Vinyl ethers of halo alcohols. V. Synthesis of new functional alkoxyethylenes by nucleophilic substitution of the halogen. Atavin, A. S.; Gusarov, A. V.; Trofimov, B. A.; Shamarina, N. V. Irkutsk. Inst. Org. Khim., Irkutsk, USSR. Zh. Org. Khim. 1970, 6(2), 228-32 (Russ). The reaction of $\text{H}_2\text{C}:\text{CHO}(\text{CH}_2)_n\text{X}$ (I) (X is Cl or Br) with KSCN gave 47-65% $\text{H}_2\text{C}:\text{CHO}(\text{CH}_2)_n\text{SCN}$ (n is 2, 3, or 4). Similarly, I reacted with $\text{AcCH}_2\text{CO}_2\text{Et}$ to give 32.5 and 48.0% $\text{H}_2\text{C}:\text{CHO}(\text{CH}_2)_n\text{CHAcCO}_2\text{Et}$ (n is, resp., 2 or 4). The reaction of I with $\text{Et}_3\text{NC(S)SK}$ gave the previously unknown $\text{H}_2\text{C}:\text{CHO}(\text{CH}_2)_n\text{SC(S)NEt}_2$ (n is 2 or 4). NaCN with I gave $\text{H}_2\text{C}:\text{CHO}(\text{CH}_2)_n\text{CN}$ (n is 3 or 4) and Na_2S_2 with I gave $[\text{H}_2\text{C}:\text{CHO}(\text{CH}_2)_n\text{S}]_2$. CPJR.

REEL/FRAME
19830479

UNCLASSIFIED

PROCESSING DATE--17JUL70

TITLE--VINYL ETHERS OF HALOALCOHOL. IV. GENERAL METHOD FOR SYNTHESIZING
MONCHALCALKOXYETHYLENES -U-

AUTHOR--SHOSTAKOVSKIY, M.F., ATAVIN, A.S., TRCFIMOV, B.A., GUSAROV, A.V.,
NIKITIN, V.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. CBSHCH. KHIM. 1970, 40(1), 70-77

DATE PUBLISHED-----70

23/5
28

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HALOGENATED ORGANIC COMPOUND, ETHYLENE, ORGANIC PHOSPHORUS
COMPOUND, GLYCOL, HETEROCYCLIC OXYGEN COMPOUND, CHEMICAL SYNTHESIS,
FLUORINATED ORGANIC COMPOUND, BROMINATED ORGANIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1980/1342

STEP NO--UR/0079/70/040/001/0070/0077

CIRC ACCESSION NO--APOC49502

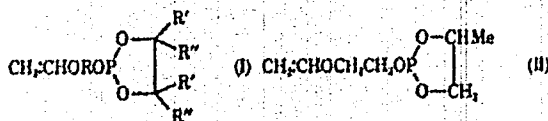
UNCLASSIFIED

Acc. Nr: **AP0049502** Abstracting Service:
CHEMICAL ABST. 5170

Ref. Code:
4R 0079

99938h Vinyl ethers of haloalcohols. IV. General method for synthesizing monohaloalkoxyethylenes. Shostakovskij, M. F.; Atavin, A. S.; Trofimov, B. A.; Gusarov, A. V.; Nikitin, V. M.; Skorobogatova, V. I. (Irkutsk. Inst. Org. Khim., Irkutsk, USSR). Zh. Obshch. Khim. 1970, 40(1), 70-7 (Russ).

A synthesis of (haloalkoxy)ethylenes was developed from the Arbuzov rearrangement of vinyloxyalkyl glycol phosphites. Heating 100 g $(CH_2)_4(OH)_2$ and 10 g KOH under 70 ml tetrahydrofuran in an autoclave 4 hr at 120° gave 54% $H_2C:CHO-(CH_2)_4OH$, b₁₂ 95°, d₂₀ 0.8926, n_D²⁰ 1.4460. Treating 0.228 mole vinyl glycol ether in 0.3 mole pyridine and 200 ml Et₂O with 0.228 mole phosphorochloridite of a glycol at 15-20° gave, after removal of C₂H₅N.HCl, (I) (R, R', and R'' given): $(CH_2)_2$, H,



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REEL/FRAME
19801342

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AP0049502

Me, b, 96.5°, d_m 1.1090, n_D 1.4615; (CH₂)₂, H, Me, b, 86-7°, 1.0730, 1.4580; (CH₂)₄, H, Me, b, 105°, 1.0599, 1.4583; (CH₂)₆, H, Me, b, 135°, 1.0340, 1.4605; (CH₂)₈, Me, Me, b, 87°, 1.0500, 1.4572; (CH₂)₁₀, Me, Me, b, 105-8°, 1.0391, 1.4595; (CH₂)₁₂-CHMe, H, Me, b, 90-5°, 1.0511, 1.4520; (CH₂)₁₄O(CH₂)₂, H, Me, b, 145°, 1.1100, 1.4645; (CH₂)₁₆, H, H, b, 93°, 1.1795, 1.4710; II, b, 65°, 1.1334, 1.4614. These with 5 moles alkyl halide heated in a sealed tube at 90-150° several hr gave 20-85% H₂C:CHORX (R and X shown): (CH₂)₂, F, b, 79°, 0.9745, 1.3860; (CH₂)₄, Cl, b, 106°, 1.0470, 1.4375; (CH₂)₆, Br, b, 50°, 1.4051, 1.4710; CH₂CH₂, I, b, 71°, 1.7585, 1.5263; (CH₂)₈, F, b, 95-8°, 0.9534, 1.4003; (CH₂)₁₀, Cl, b, 52-3°, 1.0273, 1.4375; (CH₂)₁₂, Br, b, 55°, 1.3484, 1.4705; (CH₂)₁₄, I, b, 54-5°, 1.6368, 1.5193; (CH₂)₁₆, Cl, b, 61-5°, 0.9965, 1.4458; (CH₂)₁₈, Br, b, 72-3°, 1.2860, 1.4710; (CH₂)₂₀, I, b, 70-1.5°, 1.5471, 1.5158; (CH₂)₂₂, Cl, b, 84-6°, 0.9718, 1.4478; (CH₂)₂₄, Br, b, 54-5°, 1.2049, 1.4708; (CH₂)₂₆, I, b, 84-5°, 1.3947, 1.5015; (CH₂)₂₈CHMe, Br, b, 76-8°, 1.2671, 1.4650; (CH₂)₃₀CHMe, I, b, 62-4°, 1.5056, 1.5080; (CH₂)₃₂O(CH₂)₂, Cl, b, 69-71°, 1.1040,

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19801343

AP0049502

1.4535; $(\text{CH}_2)_2\text{O}(\text{CH}_2)_2$, Br, b, 73-5°, 1.3564, 1.4750; $(\text{CH}_2)_2\text{O}(\text{CH}_2)_2$, I, b, 58-9°, 1.5893, 1.5139. Exchange of the iodo members with KF gave the fluoro analogs: $(\text{CH}_2)_2$, F, described above; $(\text{CH}_2)_2$, F, described above; $(\text{CH}_2)_2$, F, b, 115-20°, 0.9272, 1.4045. Rearrangement of I [R = $(\text{CH}_2)_2$, R¹ = R² = H] with $\text{H}_2\text{C}:\text{CHCH}_2\text{Br}$ resulted in ring opening only and gave $\text{H}_2\text{C}:\text{CHCH}_2\text{P}(\text{O})(\text{OCH}_2\text{CH}_2\text{Br})\text{O}(\text{CH}_2)_2\text{OCH}:\text{CH}_2$ (III); $(\text{PrO})_2\text{POCH}_2\text{CH}_2\text{OCH}:\text{CH}_2$ and EtI similarly gave only the open-chain $\text{H}_2\text{C}:\text{CHO}(\text{CH}_2)_2\text{OP}(\text{O})(\text{Et})\text{OPr}$, b, 87-9°, 1.0476, 1.4417. III, b, 144-5°, 1.3630, 1.4890, was obtained above in 67% yield. Reaction of 2 moles chlorohydrin with 2 moles AcH and dry HCl at -5-0° gave the requisite chloro ethers, which with 2.2 mole Et_3N at this temp., then 5 hr at 80-90°, gave the (haloalkoxy)ethylenes $\text{H}_2\text{C}:\text{CHORX}$ (R and X shown): $(\text{CH}_2)_2$, Cl; $(\text{CH}_2)_2$, Cl and $(\text{CH}_2)_2$, Br and $(\text{CH}_2)_2$, Cl, described above. Triethylene glycol and Br with red P gave $(\text{BrCH}_2\text{CH}_2\text{OCH}_2)_2$, b, 103-5°, 1.6638, 1.5010, which with powd. KOH in a Cu vessel at 95-110° in partial vacuo gave 18.5% $\text{H}_2\text{C}:\text{CHO}(\text{CH}_2)_2\text{O}(\text{CH}_2)_2\text{Br}$, described above. G. M. Kosolapoff

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19801344

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USSR

UDC 547.37+547.26'118

TROFIMOV, B. A., NIKITIN, V. M., and ~~ATAVIN, A. S.~~, Irkutsk Institute of Organic Chemistry, Siberian Department of the Academy of Sciences of the USSR

"Vinyl Ethers Containing Trivalent Phosphorus. V. Particulars of Hydrolysis of 2-(ω -Vinylhydroxyalkoxy)-1,3,2-dioxaphospholans"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(103), No 2, Feb 72, pp 346-350

Abstract: The authors studied the hydrolysis of a new group of five-membered cyclic triorgano phosphites -- 2-(ω -vinylhydroxyalkyl)-1,3,2-dioxaphospholans -- in an attempt to define more precisely the hydrolysis of molecules of this type and to derive additional information on their reactivity as compared with their acyclic analogs. It is found that 2-(ω -vinylhydroxyalkyl)-1,3,2-dioxaphospholans are hydrolyzed by the stoichiometric quantity of water, primarily with the ring intact, giving the corresponding alkylene phosphites regardless of the presence or absence of substituents in the phospholan ring. The rate of hydrolytic decay of five-membered cyclic triorganophosphites exceeds the rate for acyclic analogs both on the stage of conversion to alkylene phosphites and on the stage of conversion from alkylene phosphites to monoorganophosphites. It is proved that the first stage of the hydrolysis is autocatalytic, and

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TROFIMOV, B. A., et al., Zhurnal Obshchey Khimii, Vol 42(103), No 2, Feb 72,
pp 346-350

that there are no appreciable stresses in the 1,3,2-dioxaphospholan ring
with trigonal phosphorus.

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USSR

UDC 547.26'118+547.371

TROFIMOV, B. A., NIKITIN, V. M., ATAVIN, A. S., and KHIL'KO, M. Ya.

"Vinyl Esters Containing Trivalent Phosphorus. IV. Hydrolysis of Dialkyl (ω -Vinylhydroxyalkyl) Phosphites. Effect of the Vicinal Hydroxyl Group"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(103), No 2, Feb 72, pp 342-346

Abstract: It is shown that uncatalyzed hydrolysis of dialkyl(ω -vinylhydroxyalkyl) phosphites goes through a stage of formation of dialkyl- and alkyl (ω -vinylhydroxyalkyl) phosphites in a ratio determined both by the structure of the initial triorganophosphite and by the conditions of the reaction. It is proved that further hydrolysis of alkyl (β -vinylhydroxyalkyl) phosphites is limited by the decomposition of the vinylhydroxy group. It is shown that the vicinal hydroxy radical is a specific accelerator of hydrolysis of alkyl (β -hydroxyalkyl) phosphites.

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Acc. Nr

AP0041853

Abstracting Service:

CHEMICAL ABST.

Ref. Code

4/70 4R0366

89688n Rearrangement in the thiolysis of 2-methyl-2-(hydroxymethyl)-1,3-dioxolane. Trofimov, B. A.; ~~Atayin, A. R.~~ Mikhaleva, A. I.; Kalabin, G. A.; Vasil'ev, N. P. (Irkutsk. Inst. Org. Khim., Irkutsk, USSR). Zh. Org. Khim. 1970, 6(1), 190-1 (Russ). The reaction of 2-methyl-2-(hydroxymethyl)-1,3-dioxolane with RSH (R = Pr or iso-Bu) in acid medium gave 5-10% (RS)₂CMeCH₂OH and 80-90% (RS)₂CHCHMeSR. The expected "normal" reaction products (RS)₂CMeCH₂SR were not formed. CPJR

REEL/FRAME

19751734

1/3 · 011 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--REACTION OF 1,3,DIOXOLANES WITH ACETYLENE UNDER IOTSICH REACTION
CONDITIONS -U-
AUTHOR-(05)-SHOSTAKOVSKIY, M.F., ATAVIN, A.S., TROFIMOV, B.A., KOROSTOVA,
YE.S., NEKRASOVA, L.P.
CCOUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 668-73
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--COMPLEX COMPOUND, ACETYLENE, HYDROXYL RADICAL, ETHER, DIOXANE,
CYCLIZATION, CYCLOHEXANE, CHEMICAL REACTION TEMPERATURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1762 STEP NO--UR/0062/70/000/003/0668/0673
CIRC ACCESSION NO--AP0123562
UNCLASSIFIED

2/3 011

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PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123562

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. 1,3,DIOXOLANES REACT AT 80-120DEGREES WITH THE LOTSICH COMPLEX OF C SUB2 H SUB2 AND GIVE LOW YIELDS OF HYDROXYETHYL ETHERS OF ACETYLENIC HO COMPS. FROM IR DATA IT WAS EVIDENT THAT IN A NO. OF CASES CYCLIZATION TO 1,4,DIOXANE DERIVS. TOOK PLACE. 2,METHYL,1,3,DIOXOLANE (9 ML) AND REACTION PRODUCT OF ETMGBR AND C SUB2 H SUB2 (FROM 4.8 G MG) GAVE AFTER 3 HR, ON A STEAM BATH IN MEPH 16.7PERCENT 3,METHYL,3,(2,HYDROXYETHYL),1,PROPYNE, B SUB24 68-71DEGREES; A SIMILAR REACTION IN WHICH THE ORIGINAL COMPLEX WAS PREPD. AT 37-50DEGREES AND THE REACTION WAS RUN IN A STREAM OF C SUB2 H SUB2 2 HR AT REFLUX GAVE SEC-BU CELLOSOLVE, B SUB19 60-30DEGREES. WHEN THE ABOVE REACTION WAS RUN IN THE THERE WAS FORMED AFTER 3 HR AT 120DEGREES CRUDE HC TRIPLE BOND CCHMECH SUB2 CH SUB2 OH, B SUB19 50-62DEGREES. 2,METHYL,2,ETHYL,1,3,DIOXOLANE IN A SIMILAR REACTION COMPLETED BY HEATING 3 HR AT 120DEGREES GAVE 18.2PERCENT 3,METHYL,3,ETHYL,3,(2,HYDROXYETHYL),1,PROPYNE, B SUB15 82-50DEGREES, CONTG. IMPURITIES, ALONG WITH 8.9PERCENT 3,6,DIMETHYL,3,6,BIS(2,HYDROXY,ETHYL),4,OCTYNE, B SUB1 118-20DEGREES. WHEN THE REACTION WAS RUN IN A CONTINUED STREAM OF C SUB2 H SUB2, FINALLY AT 80DEGREES, IT GAVE 19PERCENT 2,METHYL,2,ETHYL,3,METHYLENE,1,4,DIOXOLANE MIXED WITH MEET SUB2 COCH SUB2 CH SUB2 OH, B SUB3 50-50DEGREES, WHILE THE REACTION RUN 3 HR AT 0-50DEGREES, THE 3 HR AT 100DEGREES IN MEPH GAVE MAINLY THE LAST ETHER (IMPURE).

UNCLASSIFIED

3/3 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123562

ABSTRACT/EXTRACT--PASSING C SUB2 H SUB2 5 HR INTO ETMGBR IN ET SUB2 O AND
TREATING THE MIXT. WITH 0.5 MOLE SPIRO(4.4)1,4,DIOXONONANE IN MEPH GAVE
AFTER 3 HR AT 60-95DEGREES 18.2PERCENT MIXED
1,ETHYL,1,(2,HYDROXYETHOXY)CYCLOPENTANE AND HOCH SUB2 CH SUB2 OCET(C
SUB5 H SUB10-CYCLO) SUB2, B SUB1 60-3DEGREES, AS WELL AS SOME
BIS(1,(2,HYDROXYETHOXY),1,CYCLOPENTYNYL)ACETYLENE, B SUB1 140-53DEGREES.

SIMILARLY SPIRO(4.5),1,4,DIOXODECANE GAVE
1,ETHYL,1,(2,HYDROXY,ETHOXY)CYCLOHEXANE CONTG.
1,ETHYNYL,1,(2,HYDROXYETHOXY)CYCLOHEXANE, B SUB3 89-90DEGREES; REACTION
RUN AT LOWER TEMP. ALSO GAVE THE LATTER PRODUCTS. FACILITY:
IRKUTSK. INST. ORG. KHIM., IRKUTSK, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--RADICAL PROPARGYL EXCHANGE OF HYDROXYETHYL TERTIARY AMINES.
SYNTHESIS OF N, 2 HYDROXYETHYL, PROPARGYLAMINES -U-
AUTHOR--(05)-GMITRIYEVA, Z.T., SHOSTAKOVSKIY, M.F., ATAVIN, A.S., KASHIK,
T.V., TRCFIMOV, B.A.
COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(5), 902-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BROMINATED ORGANIC COMPOUND, TERTIARY AMINE, CHEMICAL
SYNTHESIS, ORGANIC AZO COMPOUND, ETHANOL, BENZENE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1333

STEP NO--UR/0366/70/006/005/0902/0908

CIRC ACCESSION NO--490135007

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0135007

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE REACTION OF RR PRIME1 NCH SUB2 CH SUB2 CH (R AND R PRIME1 GIVEN: ET, ET; CH SUB2 :CHCH SUB2, CH SUB2 :CHCH SUB2; HOCH SUB2 CH SUB2; HOCH SUB2 CH SUB2; CH SUB2:CHCH SUB2, CH SUB2 CH SUB2 OH; PH, CH SUB2 CH SUB2 OH) WITH HC TRIPLE BOND CCH SUB2 BR IN COLD KCH SOLN. GAVE 70-90PERCENT RN(CH SUB2 CH SUB2 OH)CH SUB2 C TRIPLE BOND CH (1). HOWEVER, N(CH SUB2 CH SUB2 OH) SUB3 REACTED WITH HC TRIPLE BOND CCH SUB2 BR TO GIVE HOCH SUB2 CH SUB2 N(CH SUB2 C TRIPLE BOND CH) SUB2. AT 60-80DEGREES BESIDES 1 CYCLIC COMPOUNDS., SUCH AS N,ETHYL,2,VINYL,1,3,OXAZOLICINE WERE FORMED. SOME 1 WERE ALSO PREPD. BY REACTING HC TRIPLE BOND CCH SUB2 BR WITH RNCH SUB2 CH SUB2 OH (R EQUALS H,ME,CH SUB2 CH SUB2 OH, CH SUB2:CHCH SUB2 CH SUB2, OR PHCH SUB2). FACILITY: IRKUTSK. INST. ORG. KHIM., IRKUTSK, USSR.

UNCLASSIFIED

172 011 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--STRUCTURE OF PRODUCTS OF THE ADDITION OF DIALKYL PHOSPHITES TO
DIETHYL ETHERS OF GEM DIOLS -U-
AUTHOR--(05)--KALABIN, G.A., ATAVIN, A.S., GAVRILOVA, G.M., TROFIMOV, B.A.,
SHOSTAKOVSKIY, M.F. A
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(4), 849-52 (CHEM)
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ETHER, HETEROCYCLIC OXYGEN COMPOUND, PHOSPHATE ESTER, NUCLEAR
STRUCTURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1985/1894 STEP NO--UR/0020/70/190/004/0849/0852
CIRC ACCESSION NO--AT0101938
UNCLASSIFIED

2/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AT0101938
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FROM THE NMR SPECTRA OF THE
PRODUCTS OF REACTION OF (R PRIME1 O) SUB2 PHO WITH RCH(OCH:CH SUB2) SUB2
(PROFIMOV, ET AL., 1969), THE STRUCTURES OF THE PRODUCTS WERE SHOWN TO
BE I (R EQUAL H OR ALKYL, R PRIME1 EQUAL ALKYL). THUS WERE PREPD. I (R
EQUAL H, R PRIME1 EQUAL R PRIME2 EQUAL ME), I (R EQUAL H, R PRIME1 EQUAL
PR, R PRIME2 EQUAL ME), AND I (R EQUAL R PRIME1 EQUAL R PRIME2 EQUAL
ME). THE SPECTRAL DATA ARE TABULATED IN DETAIL. THE REACTION IS
STEREOSPECIFIC, YIELDING CIS,4,5,SUBSTITUED-I.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--2,2,8IS ALKYLTHIO,1,TRIMETHYLSILYLOXYPROPANES -U-
AUTHOR-(03)-VASILYEV, N.P., MIKHALEVA, A.I., ATAVIN, A.S.
COUNTRY OF INFO--USSR
SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 820-1
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ORGANOSILICON COMPOUND, ORGANIC SULFUR COMPOUND, PROPANE,
ORGANIC SYNTHESIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1129 STEP NO--UX/0079/70/040/004/0820/0821
CIRC ACCESSION NO--AP0128556
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0128556

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDING 11 G ME SUB3 SICL TO 20.8 G
MEC(SPK) SUB2 CH SUB2 OH IN ET SUB2 O AND 20 ML ET SUB3 N GAVE AFTER 2
HR 75PERCENT MEC(SPK) SUB2 CH SUB2 OSIME SUB3, B SUBL 94-50DEGREES, D
PRIME20 0.9716, N PRIME20 SUBD 1.4950; SIMILARLY WAS PREPD. THE *SBU)
SUB2 ANALOG (1), 78PERCENT, B SUBL 13708DEGREES, 0.9544, 1.4872; AND
76PERCENT (SCHSUB2 CHME SUB2) SUB2 ANALOG, B SUB2 126-7DEGREES, 0.9413,
1.4782. HEATING I WITH 5PERCENT HCL 3 HR GAVE 85PERCENT MEC(SBU) SUB2
CH SUB2 OH, B SUB2 126DEGREES. FACILITY: IRKUTSK. INST. ORG.
KHIM., IRKUTSK, USSR.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--SPLITTING OF AN ETHER BOND DURING DIETHYLENE GLYCOL VINYLATION -U-
AUTHOR--ATAVIN, A.S., AMOSOVA, S.V., VYLEGZHANIN, O.N., KEYKO, V.V.,
TROFIMOV, B.A. A
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (1), 149-52
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ETHYLENE GLYCOL, CHEMICAL BONDING, ETHER, ETHYLENE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/1055 STEP NO--UR/0062/70/000/001/0149/0152
CIRC ACCESSION NO--AP0104453
UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104453

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING O(CH SUB2 CH SUB2 OH) SUB2 (I) WITH KOH AND C SUB2 H SUB2 2 HR AT 160DEGREES (17 ATM INITIALLY) GAVE 53PERCENT DIVINYL ETHER 4F THE GLYCOL, B SUB13 89DEGREES, WHICH WITH 1 PERCENT HCL REGENERATED THE PURE GLYCOL, B SUB2 90DEGREES. HEATING I WITH KOH AT 165DEGREES IN C SUB2 H SUB2 (15 ATM INITIALLY) 3 HR GAVE, AFTER CHROMATOG. OF THE MIXT. 1.8PERCENT (CH SUB2 OH) SUB2 IDENTIFIED BY Silylation. THUS, DIETHYLENE GLYCOL IS CLEAVED BY KOH TO (CH SUB2 OH) SUB2 AND THE PROCESS IS ACCELERATED BY THE PRESENCE OF C SUB2 H SUB2. THE EFFECT IS POSSIBLY CAUSED BY CLEAVAGE OF THE ETHER BOND THROUGH ACTION OF THE ETHEREAL O AS A NUCLEOPHILE IN REACTION WITH C SUB2 H SUB2 AND FORMING AN INTERMEDIATE SUCH AS (HOCH SUB2 CH SUB2) SUB2 O PRIME POSITIVE CH:CH PRIME NEGATIVE.

UNCLASSIFIED

USSR

UDC 547.341:538.27

A
KALABIN, G. A., ATAVIN, A. S., GAVRILOVA, G. M., TROFIMOV, B. A.,
and Corresponding Member of the Academy of Sciences USSR SHOSTAKOV-
SKIY, M. F., Irkutsk Institute of Organic Chemistry, Irkutsk, East
Siberian Affiliate, Siberian Department, Academy of Sciences USSR

"Structure of the Products Resulting From the Addition of Dialkyl-
phosphites to Divinyl Ethers of Gem-diols"

Moscow, Doklady Akademii Nauk SSSR, Vol 190, No 4, Feb 70, pp 849-852

Abstract: On the basis of PMR data the authors conclude that the
addition of dialkylphosphites to 1,1-divinylhydroxyalkanes occurs
stereospecifically yielding 1,3-dioxolanes with cis-oriented substi-
tuents at C₄ and C₅. The PMR spectra indicate absence of free rota-
tion around the P-C and C-C bonds in the (RO)₂-P(:O)-CH₂C- fragment;
furthermore, the cycle is not planar. An assumption is made that
one of the carbon atoms of the cycle (C₄ or C₅) sticks out of the
plane of the ring by an angle of more than 30°.

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1/2 008 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--DISTRIBUTION OF METACERCARIAE OPISTHORCHIS FELINEUS TREMATODA,
OPISTHORCHIDAE IN THE CASPIAN SEA -U-
AUTHOR--ATAYEV, A.M.
COUNTRY OF INFO--USSR A
SOURCE--ZOO ZH 49(2): 300-302. 1970
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, EARTH SCIENCES AND
OCEANOGRAPHY
TOPIC TAGS--TREMATODA, SEA WATER, GEOGRAPHIC LOCATION, PARASITE FISH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/0488

STEP NO--UR/0439/70/049/002/0300/0302

CIRC ACCESSION NO--AP0134256

UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0134256

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METACERCARIAE OF THE TREMATODE
O. FELINEUS ARE RECORDED FOR THE 1ST TIME IN THE CASPIAN SEA. LARVAE OF
THE PARASITE WERE FOUND IN 8 FISH SPECIES IN THE AGRAKHANSKY BAY, OFF
THE TYULENII ISLAND AND NEAR THE PESHNOI PENINSULA. FACILITY:
DAGESTAN BR., CASPIAN RES. INST. PISCICULT., MAKHACHKALA, USSR.

UNCLASSIFIED

USSR

UDC 621.821.6:612.825.1:612.833.81

ATAYEV, M. M., Institute of Evolutionary Morphology and Animal Ecology,
Academy of Sciences USSR

"Interaction of Variations in Intensity of the External Electromagnetic Field
and the Intensity of Nervous Excitation in the Central Nervous System"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Biologicheskaya, No 1, 1972,
pp 119-134

Abstract: The structural variability of the central nervous system is connected with sequential phenomena which arises during the process of acquiring new adaptive forms of behavior. The existing theory of the formation of inter-central channel morphophysiological connections during the formation of a conditioned reflex is under discussion, and the new idea has been advanced that the occurrence of structural traces is caused by intracellular movements stereotypically repeated in time and space. These movements are caused by internal forces the nature of which is connected with the interaction of electromagnetic phenomena on the subcellular molecular level. It is assumed that as a result of an increase in excitability by reinforcement, reorientation of the subcellular polar macromolecules of the neural constellations concerned takes place. A change also takes place in the vector of the total
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USSR

ATAYEV, M. M., Izvestiya Akademii Nauk SSSR, Seriya Biologicheskayay, No 1, 9172, pp 119-134

polar moment of the central nervous system which is fixed in the polar memory in the specific environment of the organism. Experimental data are presented in this article aimed at establishing the correctness of the above-presented assumptions by discovering the interaction of the external and internal electromagnetic oscillations with respect to the behavioral response reaction of the animal. An electromagnetic field was used as the conditioning agent. The conditioned reflex was developed in two subjects differing sharply with respect to level of cephalization -- molluscs (*Planorbis corneus* var. *rubra*) and cats. The external electromagnetic field in the superlong wave range can serve as a conditioning signal for the adaptive protective reflex. The electromagnetic field in the 20 to 100 hertz band was the most effective. These data indicate that both in the case of lower and higher representatives of the animal world, in the mechanism of adaptive activity the largest polar macromolecules the natural relaxation period of which is quite large are primarily concerned.

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Acc. Nr:

AP0034212

Abstracting Service:

CHEMICAL ABST. 4-76

Ref. Code:

UR 0078

A

71248j Complexing in cupric nitrate-2-methylbenzothiazole-methanol and cupric nitrate-2-hydroxymethylbenzothiazole-methanol systems. Slyusarenko, K. F.; Atemenko, M. V. (Kiev. Tekhnol. Inst. Pishch. Prom., Kiev, USSR). *Zh. Neorg. Khim.* 1970, 15(1), 106-11 (Russ). It is confirmed spectroscopically that a 1:2 complex (I), having an instability const. of 4×10^{-4} , is formed between $\text{Cu}(\text{NO}_3)_2$ and 2-hydroxybenzothiazole (L) in MeOH solns. Absorption max. of I ($\sim 14,500$ and $10,800 \text{ cm}^{-1}$) correspond to *d-d* transition and indicate distorted octahedral structure of I. I is more stable than an analogous complex of $\text{Cu}(\text{NO}_3)_2$ with 2-methylbenzothiazole-MeOH.

HMJR

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REEL/FRA

19710865

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1/2 015 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--ANTIBIOTIC POLYRESISTANT STAPHYLOCOCCAL CARRIER STATE IN PATIENTS
WITH TUBERCULOSIS AND IN HEALTHY PERSONS -U-
AUTHOR--(04)-GENCHIKOV, L.A., ATOPEK, S.YA., KALYUK, A.N., SOKOLOVSKIY,
V.T.
COUNTRY OF INFO--USSR
SOURCE--PROBL TUBERK 48(1): 49-53. 1970
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TUBERCULOSIS, STAPHYLOCOCCUS, ANTIBIOTIC, DRUG RESISTANCE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/0450 STEP NO--UR/0000/70/048/001/0049/0053
CIRC ACCESSION NO--AP0134218
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134218

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXCRETION BY TUBERCULOUS PATIENTS OF POLYRESISTANT STAPHYLOCOCCI AND ALSO THE STAPHYLOCOCCAL CARRIER STATE IN TUBERCULOUS PATIENTS, MEDICAL STAFF MEMBERS AND HEALTHY PERSONS OUTSIDE THE HOSPITAL WERE STUDIED. IN LOOKING INTO THE CARRIER STATE PROBLEM, THE STAPHYLOCOCCI CULTURES MOST RESISTANT TO ANTIBIOTICS WERE OBTAINED IN THE GROUP OF PATIENTS, WERE LESS FREQUENTLY OBSERVED IN THE MEDICAL STAFF GROUP AND EVEN LESS IN HEALTHY PERSONS. IN THE CLINIC, THE POLYRESISTANT STAPHYLOCOCCAL CULTURES SHOWED CONSIDERABLY HIGHER RESISTANCE LEVELS AND WERE MUCH MORE FREQUENT (IN 98.5PERCENT OF PATIENTS AND IN 66.9PERCENT OF THE MEDICAL STAFF MEMBERS) THAN WAS THE CASE IN HEALTHY SUBJECTS. IT IS OBVIOUS THAT WITH LENGTHY STAYS IN MEDICAL ESTABLISHMENTS AND LONG TERM MEDICATION AIDS THE OCCURRENCE OF INTENSIVE CROSS TRANSMISSION OF MICROBIAL FORMS RESISTANT TO ANTIBIOTICS BOTH ON THE PART OF PATIENTS AND MEDICAL STAFF MEMBERS. BECAUSE OF THIS, MEDICAL PERSONNEL SHOULD BE SUBJECTED TO SPECIAL EXAMINATIONS, AND IN CASES OF RESISTANT STAPHYLOCOCCI BEING EXCRETED, APPROPRIATE SANITARY MEASURES SHOULD BE UNDERTAKEN. FACILITY: DEP. EPIDEMIOLOG., N. R. GAMALEYA INST. EPIDEMIOLOG. MICROBIOLOG., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 681.327

ATOVM'YAN, A. E., KUDRYAVTSEV, O. M., LITVAN, A. B., MALOVICHKO, V. V.,
MUSATOV, I. F., PUKOV, N. P., YAROSHEVSKIY, I. D.

"A Multiple-Reel Tape Transport Mechanism for Memory Devices"

USSR Author's Certificate No 288051, filed 5 Aug 69, published 20 Apr 71
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, Oct
71, Abstract No 10B344 P)

Translation: Multiple-reel tape transport mechanisms for memory units are known which contain a reel cassette, reel drive spindles, and a drive for moving the cassette. A distinguishing feature of the described device is arrangement of the reels in the cassette by pairs in two groups coaxially with each other and with their drive spindles; and the cassette contains a bracket with guides for displacing the cassette along the axis of the spindles, which are equipped with releasable cartridges containing cams for locating the reels with internal tapers. Fastened to the reels are spring-loaded gear sectors which engage in the initial state with geared rims fastened on the cassette housing. This speeds up data sampling and improves the reliability of the device. Two illustrations.

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USSR

UDC 681.327.66.002.72

ATOVM'YAN, A. E., ANFIMOV, M. A., V'YUGIN, V. A., KOLOBASHKIN, N. I., LITVAN, A. B., MAZAN'KO, B. P., AND SOLOV'YEV, V. A.

"Device for Checking Bunched Conductors"

USSR Author's Certificate No 277858, filed 27 May 69, published 6 Nov 70
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 6, Jun 71, Abstract No 6 B153 P)

Translation: A testing device containing a memory, coincidence circuit, and a display circuit is well known. This device does not provide for automation of control of bunched conductors during the manufacturing process. The proposed device for similar purpose is distinguished by the fact that it contains two ferrite cores with an open magnetic conductor, into one of which wires corresponding to the code "1" are introduced, and into the other, wires corresponding to the code "0." These are the primary coils of transformers the secondary windings of which are connected to the first input of each of two coincidence circuits respectively. The second input of each coincidence circuit is connected to the memory output, and their outputs are connected to the interrogation device connected to the conductors of the tested bunched conductors and the interrogation current control circuit. The control of the bunched conductors during the production process is automated in this way. There is 1 illustration.

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USSR

UDC: 681.3.001.019.3

ATOVMYAN, I. O. and ARSHAVSKIY, M. I.

"Diagnosing Defects of an Information Search Device Using External Media"

Riga, Avtomatika i vychislitel'naya tekhnika, No 1, 1972, pp 32-36

Abstract: Because the problem of devising diagnostic tests for automations with memories is too complex to permit setting up algorithms that can be used by computers, the authors concentrate on the problem of diagnosing defects in partial automations widely used in computer systems. The search device they consider is part of a device for introducing information, the basic problem of which is to find, through a shift in the information carrier, the address block communicated to the device by the central machine. A description of this search device is given, together with a block diagram, and the operation of its component parts analyzed. The system developed by the authors for diagnosing the defect is described.

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USSR

UDC 681.326.658.562:533

ATOVMYAN, I. O., and ARSHAVSKIY, M. I., Moscow Engineering Physics Institute

"A Device for Setting the Address in the Peripheral Units of Digital Computers"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 23, Aug 71, Author's Certificate No 310249, Division G, filed 31 Jan 70, published 26 Jul 71, p 151

Translation: This Author's Certificate introduces a device for setting the address in the peripheral units of digital computers. The device is based on the use of pulse potential elements and contains flip-flops with counting inputs, a ripple-through carry circuit with ripple-through carry amplifiers, and a circuit for setting up the initial code. As a distinguishing feature of the patent, the capability of localizing malfunctions is increased by adding a test mode flip-flop and a group of differentiating diodes whose potential inputs are tied together and connected to the one-output terminal of the test mode flip-flop. The pulse inputs of the differentiating diodes are connected to the zero-output terminals of the corresponding flip-flops for the digital places, and the outputs of the differentiating diodes are connected to the inputs of the ripple-through carry amplifiers of the adjacent most significant digit.

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USSR

UDC 548.736

ALIYEV, Z. G., ATOVMYAN, L. O., and PONOMAREV, V. I., Branch of the Institute of Chemical Physics, Academy of Sciences USSR

"Crystalline Structure of the Monohydrate of Pyrazine-1,3-dicarbonato-carbonyltriphenylphosphine Rhodium (I)"

Moscow, Zhurnal Strukturnoy Khimii, Vol 14, No 4, Jul/Aug 73, pp 748-749

Abstract: X-ray structural analysis of the crystalline $[\text{Rh}(\text{pyrazine-2,3-dicarboxylic acid})(\text{CO})\text{pPh}_3]$ showed it to be of monoclinic syngony: $a = 11.200 \pm 0.005$, $b = 27.87 \pm 0.01$, $c = 7.695 \pm 0.005 \text{ \AA}$, $\beta = 99.5 \pm 0.1^\circ$, $d = 1.63 \text{ g/cm}^3$, $Z = 4$. The structure of a crystal consists of discrete monomeric molecules and water. The pyrazine-2,3-dicarboxylic acid forms a flat five-membered ring with the metal atom. The Ph coordination is flat, quadratic, the carbonyl group being oriented trans to the oxygen atom of the organic acid.

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- 7 -

1/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THE CHOICE OF A PRINCIPAL SCHEME OF HIGHLY MOBILE GAMMA THERAPEUTIC
APPARATUS -U-
AUTHOR-(04)-ATOVTANY, A.E., GORDON, V.I., DAVYDOVA, I.A., LITVAN, A.B.
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 5, PP 28-31
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--IRRADIATION APPARATUS, MEDICAL APPARATUS, GAMMA RADIATION

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0282 STEP NO--UR/0241/70/015/005/0028/0031
CIRC ACCESSION NO--AP0120971
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120971

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROPERTIES OF A KINEMATIC PRINCIPAL SCHEME ARE A FACTOR DETERMINING THE QUALITY OF THE GAMMA THERAPEUTIC APPARATUS FOR MOBILE IRRADIATION. THE ISSUE DISCUSSES KINEMATIC DIFFERENT GAMMA APPARATUS AND ANALYZES THE INFLUENCE OF PARAMETERS OF THE RADIATION HEAD ON THE TECHNICAL CHARACTERISTICS OF APPARATUS. A NEW SCHEME OF MOUNTING OF MECHANISMS OF THE RADIATION HEAD IS PROPOSED AS A POSSIBILITY OF ESSENTIAL IMPROVEMENT OF THE DESIGN OF GAMMA THERAPEUTIC APPARATUS FOR MOBILE IRRADIATION. FACILITY:

MOSKOVSKIY N-I RENTGENO RADIOLOGICHESKIY INSTITUT MINISTERSTVA
ZDRAVOOKHRANENIYA RSFSR.

UNCLASSIFIED

I/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--ACID COMPOSITION OF BUTTERFAT -U-
AUTHOR--ATRAMENTOVA, V.G. A
COUNTRY OF INFO--USSR
SOURCE--VISN. SIL'S'KOGOSPOD. NAUKI 1970, 13(3), 90-4
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--GAS CHROMATOGRAPHY, FATTY ACID, FOOD
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605007/F03 STEP NO--UR/0534/70/013/003/0090/0094
CIRC ACCESSION NO--AP0139922
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139922

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW. GAS LIQ.

CHROMATOGRAPHIC INVESTIGATIONS SHOW THAT BUTTERFAT CONTAINS 58-76 WT.

PERCENT OF SATD. FATTY ACIDS. OLEIC, LINOLEIC, AND LINOLENIC ACIDS ARE

THE MOST IMPORTANT UNSATD. ACIDS.

FACILITY: NAUK.-DOSLID. INST.

TRAVINNITSVA LISOSTEPU POLISSYA, USSR.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--FATTY ACID AND GLYCERIDE COMPOSITION OF BUTTERFAT -U-
AUTHOR--(03)-YAKUBOV, M.K., GLADKAYA, V.F., ATRAMENTOVA, V.G.
COUNTRY OF INFO--USSR
SOURCE--MOLOCH. PROM. 1970, 31(2), 19-21
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--FATTY ACID, FAT, FOOD ANALYSIS, GLYCERIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1993/0253 STEP NO--UR/0333/70/031/002/0019/0021
CIRC ACCESSION NO--AP0113188
UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--09OCT70
CIRC ACCESSION NO--AP0113188
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BUTTERFAT CONTG. 23.65 AND 36.05
MOL. PERCENT UNSATD. ACIDS CONSISTED MAINLY OF DI AND TRISATD.
GLYCERIDES. MONOSATD. AND TRIUNSATD. GLYCERIDES WERE NOT FOUND IN
WINTER FAT, AND IN SUMMER FAT ONLY 8.17 AND 0.31PERCENT, RESP., WERE
FOUND. FACILITY: KHAR'KOV, POLITEKH. INST. IM. LENINA, KHARKOV,
USSR.

UNCLASSIFIED

USSR

UDC 623.621.391.825:621.37/39

ATRAZHEV, M. P., Candidate of Technical Sciences, IL'IN, V. A., Candidate of Technical Sciences, and MAR'IN, N. P., Doctor of Technical Sciences

Bor'ba s Radioelektronnyimi Sredstvami (Military Electronics Countermeasures), Moscow, "Voenizdat," 1972, 272 pp

Translation: Annotation: This book, written on the basis of unclassified foreign sources, briefly characterizes the contemporary air defense status of the capitalist countries and examines countermeasure techniques in this defense. The procedures for applying various types of active countermeasures are listed and the gear they utilize is described. The methods of obtaining passive jamming, false targets, and decoys are considered. The basic techniques for surveillance of hostile electronics systems are presented along with procedures for appraising communications countermeasure effectiveness.

The book is intended for the broad circle of readers interested in the fundamentals of electronics countermeasures.

Candidate of Technical Sciences V. A. Il'in wrote chapters 1-3 and section 6 of chapter 4. Doctor of Technical Sciences N. P. Mar'in wrote chapters 4-6, and Candidate of Technical Sciences M. P. Atrazhev wrote chapters 7-9.

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ATRAZHEV, M. P. and IL'IN, V. A., Bor'ba s Radioelektronnymi Sredstvami, 1972, 272 pp

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5/5

ATROSHCHENKO, D. V.

5725 45/08
6-73

VII-9a. PERFECTION OF THE STRUCTURE AND MECHANICAL STRENGTH OF SINGLE CRYSTALS OF THE Al₂Si TYPE GROWN FROM A MELT AND FROM THE VAPOR PHASE
Article by L. A. Smolov, D. V. Atroshchenko, O. A. Fedorenko, V. V. Kukolnikov, Novosibirsk, III Symposium on Intermetallics, Novosibirsk, 12-17 June 1972, p. 110

The single CDS and CdSe crystals grown from a melt under inert pressure have the structure of wurtzite, and ZnSe, CdTe and ZnTe have the structure of sphalerite. The nonaligned, single crystals of ZnS have the structure of sphalerite but they contain a large number of imperfections connected with the statistical disordering and errors in the superposition of the atomic layers. The type of crystal of ZnS single crystals grown from the vapor phase is determined by the synthesis conditions and, above all, by the temperature.

The etching pictures of different planes of ZnS single crystals grown from a melt and from the vapor phase are compared. A study was made of the microstrength characteristics of single Al₂Si crystals as a function of the crystal structure, the degree of its perfection and the lattice parameters.

It was demonstrated that alloying single ZnS crystals with donor acceptor admixtures (copper), the sphalerite structure, and alloying with crystals, a study was made of the anisotropy of the microhardness, and conclusions were drawn regarding the laws of plastic flow caused by the indentation of the microhardness meter.

Physical Properties

USSR

UDC: 620.18:539.4.019.2

ATROSHCHENKO, E. S., KOSOVICH, V. A., SEDYKH, V. S., and SHORSHOROV, M. KH., Volgo-grad, Moscow

"The Physico-Mechanical Properties of Blanks Produced by Explosive Pressing"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 73, pp 123-127

Abstract: The authors study the density, electric conductivity, and hardness of pressings after the explosive, matrixless pressing of iron, nickel, and titanium powder. It is shown that the physico-mechanical properties of pressings obtained by explosive pressing are determined primarily by interparticle contacts with a metallic bond. Simultaneously the inadequate metallic bond of the particles in the briquets is indicated, showing the necessity for the subsequent sintering of the briquets.

STKS 692 CS
6-73

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ATROSHCHENKO, L. V.

VIII-2. MECHANISM OF THE OCCURRENCE OF PORES IN CRYSTALS GROWN FROM A GAS-SATURATED MELT

Article by L. I. Birman, Ya. R. Dobrovinskaya, V. V. Pishchik, G. A. Sergeyev and L. V. Atroshchenko, All-Union Scientific Research Institute of Single Crystals, Kharkov Novosibirsk, III Sibirskiy Nauchno-Issledovatskiy Tsentr Poluprovodnikov Kharkovskiy P'lenok, Krasnodar, 12-17 June 1972, p 127

A study was made of the physical processes defining the pore formation in single crystals for their growth from a gas-saturated melt. The dissociation and saturation of the melt with the gas solution components, their retention in the melt as a result of diffusion and convection are investigated. A study was made of the problem of the occurrence of nucleating centers of the gas phase at the crystallization front and their effect on the pore formation in the liquid phase.

The morphology of pores in single crystals of cadmium sulfide, zinc sulfide and leucosapphire was investigated. In the crystals pores of spherical, faceted and drop shape were observed. Studies were made of the problem of gas retention in the melt during the process of high-temperature annealing. Certain problems of the growth kinetics of bubbles in the melt and the columnar pores in the crystals are discussed.

The general laws of the occurrence of pores in single crystals of semiconducting ionic compounds grown from a dissociating melt were found.

USSR

A

UDC 548.55

GAL'CHINETS'KIY, L. P., ~~ATROSECHENKO~~, L. V., KOSHCHIN, V. M.,
SYSOYEV, L. A., All Union Scientific Research Institute of
Single crystals, Khar'kov

"Single Crystals of In_2Te_3 With a Progressively Varying Magnitude
of Deviation From Stoichiometry"

Moscow, Neorganicheskiye Materialy, Vol 6, No 5, May 70, pp 860-
863

Abstract: The authors studied alloys in the area of In_2Te_3 homogeneity using single crystal samples and compared the results obtained with data from polycrystalline materials. Single crystal samples were obtained by zone melting. The results corroborated the composition diagram plotted from earlier data for the In-Te system, close to the compound In_2Te_3 . It was further determined that physical properties of single crystals in the entire range of the existence of In_2Te_3 are identical with the properties of polycrystalline samples. Deviations from stoichiometry show practically no effect on the electric properties of the defective phase of In_2Te_3 .

A
USSR

UDC 576.858.093.1:547.1.128

KRISTAPSON, M. ZH., RUMYANTSEVA, N. P., REZNIYEKS, A. A., and ATREMA, A. K., Institute of Microbiology imeni Avgust Kirshenshteyn, Academy of Sciences, Latvian SSR

"Use of Emulsions of Organosilicon Compounds in Virological Practice"

Moscow, Voprosy Virusologii, No 1, 1970, pp 116-119

Abstract: A transparent, rapidly coagulating plasma was obtained from the blood of humans and some animals (horses, rams) using a variety of siloxane emulsions. In some cases horse's blood separated the plasma without centrifugation, simply by being allowed to stand in a refrigerator at 4° C. The plasma coagulated and acquired a jelly-like consistency. Clotting time in test tubes with a siloxane coating was considerably longer as compared with the control (10-15, 8-10, and more than 30 min for human, ram's and horse's blood, respectively). In toxicity tests, plasma obtained with the use of silicones was added to cultures of human embryonic fibroblasts and chick embryos. In some cases cell suspensions were added directly to test tubes treated with silicones. No signs of degeneration or other significant changes were noted in the tissue cultures.

1/1

1/2 025 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--USE OF EMULSIONS OF SILICO ORGANIC COMPOUNDS IN VIROLOGICAL
PRACTICE -U-
AUTHOR-(04)-KRISTAPSON, M.ZH., RUMYANTSEVA, N.P., REZNIYEKS, A.A., ATRENA,
A.K.
COUNTRY OF INFO--USSR *A*
SOURCE--VOPROSY VIROSOLOGII, 1970, NR 1, PP 116-120
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TISSUE CULTURE, VIROLOGY, ORGANOSILICON COMPOUND, WHOLE BLOOD

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/0065 STEP NO--UR/0402/70/000/001/0116/0120
CIRC ACCESSION NO--AP0103745
UNCLASSIFIED

2/2 025 UNCLASSIFIED PROCESSING DATE--18SEP70
CIRC ACCESSION NO--AP0103745
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER PRESENTS THE RESULTS OF
TESTS OF NATIONAL SILICO ORGANIC COMPOUNDS OR CILOVANES FOR PRODUCTION
OF NATIVE PLASMA FROM THE WHOLE BLOOD AND TESTS OF THEIR TOXICITY FOR
TISSUE CULTURES.

UNCLASSIFIED

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Transportation and Conveying

USSR

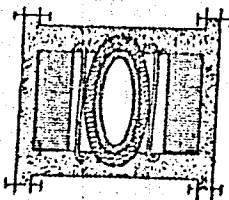
UDC: 621.643

ATROSHCHENKO, L. S., VORONINA, S. M., Donetsk State University

"A Pipeline for Transporting Liquid Oxygen"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obrazttsy, Tovarnyye Znaki, No 10, Apr 72, Author's Certificate No 332284, Division F, filed 27 Jul 70, published 14 Mar 72, pp 145-146

Translation: This Author's Certificate introduces a pipeline for transporting liquid oxygen which consists of an inner heat-insulated tube and an outer jacket. As a distinguishing feature of the patent, the liquid oxygen is transferred without a pump by fitting the pipeline with a magnetic circuit and an electric winding.



1/1

USSR

UDC 546.48'22:548.55:539.4

~~ATROSHCHENKO, L. V.~~, SYSOYEV, L. A., OBUKHOVSKIY, YA. A., and KOSHKIN, V. M., All-Union Scientific Research Institute of Single Crystals

"Effect of the Orientation of the Second Phase on the Anisotropy of Brittle Failure in Single Crystals of CdS Alloyed With Lithium"

Moscow, Neorganicheskiye Materialy, Vol 6, No 11, Nov 70, pp 1917-1921

Abstract: A study was made of the anisotropy of brittle failure in single crystals of cadmium sulfide alloyed with lithium as a function of concentration. A metallographic investigation of sections, the cleavage structure, and the pattern of brittle failure of the crystals around the impressions made by microindenter loading showed that at Li concentrations of the order of $0.5 \cdot 10^{-2}$ wt% the cleavage plane of cadmium sulfide is modified. If nonimpurity CdS single crystals undergo cleavage only along the $\{100\}$ or $\{110\}$ planes, then brittle failure can occur in cadmium sulfide strongly alloyed with lithium only along the basal planes $\{001\}$. This effect is associated with the segregation of the second phase as plates arranged in layers, parallel to the $\{001\}$ planes of the matrix crystal. It was experimentally shown that the plates are the compound Li_2S .

USSR

A
UDC 537.311.33:536.7

KOSHKIN, V. M., and ATROSECHENKO, L. V., All-Union Scientific Research Institute of Single Crystals, Khar'kov

"Thermodynamic Study of Solubility of Impurities in Semiconductors With Stoichiometric Vacancies"

Moscow, Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol 6, No 4, Apr 70, pp 714-719

Abstract: The article presents experimental data on the solubility of a number of impurities (Bi, Sb, Mg, Cd, Zn, Cn) in Ga_2Te_3 , as well as new data on In_2Te_3 -impurity constitution diagrams. The experimental findings on the solubility of impurities in the alpha phase of In_2Te_3 and in Ga_2Te_3 were compared quantitatively with the thermodynamic model constructed by the authors et al. for the solubility of impurities and deviations from stoichiometry. The results confirm the thermody-

1/2

USSR

KOSHKIN, V. M., and ATROSHCHENKO, L. V., Izvestiya Akademii Nauk SSSR
-- Neorganicheskiye Materialy, Vol 6, No 4, Apr 70, pp 714-719

namic model. It is shown that the maximum solubility of the impurities, as well as constitution-diagram peculiarities are determined by the size factor of the impurity. The characteristic size of the impurity is determined by its atomic radius, which corresponds to the nonionized state. Impurities in crystals with stoichiometric vacancies are localized in the latter, remaining in a nonionized state.

One of the measurements was made by V. K. KOMAR'.

1/2 024
UNCLASSIFIED
TITLE--LOCAL ELASTIC STRESSES IN NEUTRAL VACANCIES AND STOICHIOMETRIC
DEVIATIONS IN GA SUB2 TE SUB3 TYPE CRYSTALS -U-
AUTHOR--(02)-KOSHKIN, V.M., ATROSHCHENKO, L.V.
PROCESSING DATE--27NOV70
COUNTRY OF INFO--USSR
SOURCE--FIZ. TVERD. TELA 1970, 12(5), 1536-8
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--GALLIUM TELURIDE, CRYSTAL VACANCY, IMPURITY LEVEL, ELASTIC
STRESS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/1139
STEP NO--UR/0181/70/012/005/1536/1538
CIRC ACCESSION NO--AP0136559
UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136559

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN ACCORDANCE WITH A THERMODYNAMIC MODEL, IN CRYSTALS CONTG. LARGE AMTS. OF STOICHIOMETRIC VACANCIES, THE SOLY. OF IMPURITIES AND DEVIATIONS FROM STOICHIOMETRY ARE DETD. BY THE MAGNITUDE OF ELASTIC STRESSES ON THE IMPURITIES AND SUPERSTOICHIOMETRIC ATOMS AS WELL AS BY THE MAGNITUDE OF LOCAL ELASTIC STRESSES ON THE STOICHIOMETRIC VACANCIES. FACILITY: VSES. NAUCH.-ISSLED. INST. MONOKRIST., KHARKOV, USSR.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--SINGLE CRYSTALS OF IN SUB2 TE SUB3 WITH A PROGRESSIVELY VARYING
MAGNITUDE OF DEVIATION FROM STOICHIOMETRY -U-
AUTHOR--(04)-GALCHINETSKIY, L.P., ATROSHCHENKO, L.V., KOSHKIN, V.M.,
SYSOYEV, L.A.
COUNTRY OF INFO--USSR
SOURCE--IZV. SSSR. MOSCOW, NEORGANICHESKIYE MATERIALY, VOL 6, NO 5, MAY
70, PP 860-863
DATE PUBLISHED----MAY70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--SINGLE CRYSTAL, INDIUM COMPOUND, TELLURIDE, ELECTRIC PROPERTY,
PHYSICAL PROPERTY, STOICHIOMETRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3005/1534 STEP NO--UR/0363/70/006/005/0860/0863
CIRC ACCESSION NO--AP0133461
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0133461

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS STUDIED ALLOYS IN THE AREA OF IN SUB2 TE SUB3 HOMOGENEITY USING SINGLE CRYSTAL SAMPLES AND COMPARED THE RESULTS OBTAINED WITH DATA FROM POLYCRYSTALLINE MATERIALS. SINGLE CRYSTAL SAMPLES WERE OBTAINED BY ZONE MELTING. THE RESULTS CORROBORATED THE COMPOSITION DIAGRAM PLOTTED FROM EARLIER DATA FOR THE IN-TE SYSTEM, CLOSE TO THE COMPOUND IN SUB2 TE SUB3. IT WAS FURTHER DETERMINED THAT PHYSICAL PROPERTIES OF SINGLE CRYSTALS IN THE ENTIRE RANGE OF THE EXISTENCE OF IN SUB2 TE SUB3 ARE IDENTICAL WITH THE PROPERTIES OF POLYCRYSTALLINE SAMPLES. DEVIATIONS FROM STIOCHOMETRY SHOW PRACTICALLY NO EFFECT ON THE ELECTRIC PROPERTIES OF THE DEFECTIVE PHASE OF IN SUB2 TE SUB3. FACILITY: ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF SINGLE CRYSTALS, KHAR'KOV.

UNCLASSIFIED

Acc. Nr:

AP0101521

Abstracting Service:
CHEMICAL ABST. 6-70

A

Ref. Code:

UR 0064

113422u Kinetics of the conversion of methane by steam under pressure. Atroshchenko, V. I.; Zvyagintsev, G. L. (USSR). *Khim. Prom. (Moscow)* 1970, 46(1), 36-8 (Russ). The catalytic conversion of sulfide-free natural gas in contact with the GIAP-3 catalyst was investigated at 873-1073°K, 41 atm., flow rates of 3000-50,000 vol./hr. and steam-gas ratios of 0.5-4.0:1. The time needed to reach an equil. deg. of conversion of the CH₄ was 0.20-0.25 sec. The rate const., *k*, of the reaction in the presence of an excess of steam, e.g., at 2:1 H₂O-CH₄ ratio was practically independent of the pressure between 2 and 41 atm and its value at 1073°K was 31.6 atm./sec; the energy of activation of the reaction was 90,300 J/mole. The relation between *k* and temp., *T*, can be expressed by the equation $\log k = 5.90 - (4720/T)$. At H₂O:CH₄ ratios < ~1.2:1 *k* decreased sharply with decreasing H₂O-CH₄ ratio. At low H₂O-CH₄ ratios, the conversion mechanism involved mainly free-radical decompn. of CH₄, while at high H₂O-CH₄ ratios, thermal decompn. of CH₄ was predominant. A. Aladjem J 77C

REEL/FRAME
19851431

7

1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SIMPLIFIED METHOD FOR CALCULATING THE EQUILIBRIUM COMPOSITION OF
NITROGEN OXIDES OVER NITRIC ACID SOLUTIONS -U-
AUTHOR-(03)-ATROSHCHENKO, V.I., BAGDASARYAN, V.S., PERLOV, YE.I.
COUNTRY OF INFO--USSR
SOURCE--ARM. KHIM. ZH. 1970, 23(2), 107-13
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--NITROGEN OXIDE, NITRIC ACID, CHEMICAL EQUILIBRIUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1995/1319 STEP NO--UR/0426/70/023/002/0107/0113
CIRC ACCESSION NO--AP0116779
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0116779

ABSTRACT/EXTRACT--(U) GP-G- ABSTRACT. EQUATIONS WERE STUDIED, ALONG WITH METHODS FOR THEIR SOLUTION, FOR CALCG. THE EQUIL. COMPN. OF THE N OXIDES OVER HNO SUB3 SOLNS. AS A FUNCTION OF THE PARTIAL PRESSURE OF THE OXIDES AND THEIR DEGREE OF OXID. IN THE STARTING GAS MIXT. CALCNS. WERE MADE WITH AND WITHOUT TAKING INTO ACCOUNT THE CHANGE IN THE GAS VOL. DUE TO THE REACTION OF THE OXIDES WITH THE ACID SOLNS. NOMOGRAMS ARE GIVEN TO SIMPLIFY THE CALCNS. FACILITY: GOS. NAUCH.-ISSLED. INST. AVTOMAT. PROIZVOD. PROTSSESS. KHIM. PROM. TSVET. MET., KIROVAKAN, USSR.

UNCLASSIFIED

USSR

Forming

UDC 621.73.043

ATROSHENKO, A. P., SEDEL'NIKOV, YE. P., SHASTIN, E. G., and SEVEROV, M. A.

"Precise Barb Stamping of Turbine Blades"

Moscow, Kuznechno-Shtanpovochnoye Proizvodstvo, No 6, Jun 73, pp 1-4

Abstract: A study is made of precision stamping of turbine blades with minimum allowances for cutting (and in some cases allowance only for burnishing and finishing). The precision stamping represents a departure from stamping with the usual allowances, governed by GOST7505-55. The new technology involves hot-stamping crankshaft presses and is used to forge 212-mm-long turbine blades for the 16th working stage of the VT-100 turbine. Comparative data are presented for material expenditures under the old and new methods. Five figures, and one table.

1/1

USSR

UDC 539.374

ATROSHENKO, A. P., SEDEL'NIKOV, YE. P.

"More Precise Technique for Calculating Upsetting in Horizontal-Forging Machines of Shaped Blanks for Turbine Blades"

Tr. Leningr. politekhn. in-ta (Works of Leningrad Polytechnical Institute), 1971, No. 322, pp 129-132 (from RZh-Mekhanika, No 12, Dec 71, Abstract No 12V580).

Translation: A study of the upsetting of blanks of 1Kh13 and 2Kh13 heat-resistant steels and EI823 and EI765 alloys was conducted to refine the calculation for upsetting shaped blanks on a horizontal-forging machine for turbine blades. Numerical values of the coefficients are given and also formulas for calculating the individual elements of the upsetting stamps considering the types of steel and alloy. It is shown that in calculations of a technological process and the design of dies in upsetting, it is necessary to take into account the characteristics of the plastic deformation of the heat-resistant steels and alloys. Authors' abstract.

1/1

1/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--VERIFICATION OF THE SPIN-SPIN TEMPERATURE CONCEPT IN EXPERIMENTS OF
SATURATION OF ELECTRON PARAMAGNETIC RESONANCE -U-
AUTHOR--ATSARKIN, V.A.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58,
NR 6, PP 1884-1895
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--EPR, MAGNETIC FIELD, CRYSTAL, SPIN LATTICE RELAXATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0406

STEP NO--UR/0056/70/053/006/1884/1895

CIRC ACCESSION NO--AP0121083

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121083

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SHAPE OF THE EPR LINE OF THE CE PRIME3 POSITION ION IN A CAWO SUB4 CRYSTAL IS INVESTIGATED AT 1.80DEGREESK UNDER SATURATION CONDITIONS WITH A SHIFT RELATIVE TO THE LINE CENTER. EFFECTS PREDICTED BY THE SPIN-SPIN TEMPERATURE (T SUBSS) THEORY (PRIME1) ARE OBSERVED. IN PARTICULAR IN THE TRANSIENT AND STATIONARY STATES STIMULATED EMISSION IN THE EPR LINE WING WAS OBSERVED. THE EFFECT STRONGLY GROWS ON MOVING FROM THE WING TO THE CENTER OF THE LINE UNDER SATURATION CONDITIONS. A DETAILED ANALYSIS OF THE LINE SHAPE AND OF TRANSIENT AND RELAXATION PROCESSES REVEALED SATISFACTORY QUANTITATIVE AGREEMENT BETWEEN THE THEORY BASED ON THE T SUBSS CONCEPT AND THE EXPERIMENTAL DATA. THE MEAN LOCAL FIELD STRENGTHS (YH SUBL EQUALS 2.3 MHZ) AND THE SPIN LATTICE RELAXATION TIME FOR THE SPIN SPIN INTERACTION POOL (T SUB1 PRIME APPROXIMATELY EQUAL TO 0.5 SEC) ARE ESTIMATED. WITH INCREASE OF THE INHOMOGENEOUS EPR LINE WIDTH DUE TO INCREASE OF THE ANGLE THETA BETWEEN THE MAGNETIC FIELD AND CRYSTAL AXIS FROM 0 TO 20DEGREES, IT IS FOUND THAT ENHANCEMENT OF THE EFFECTS INVOLVING A SHIFT OF T SUBSS OCCURS. WITH FURTHER GROWTH OF THETA (THETA GREATER THAN 20DEGREES) THE EFFECTS BECOME WEAKER AND THEN DISSAPPEAR. THE RESULTS ARE INTERPRETED FROM THE STANDPOINT OF THE (SPIN PACKETS) MODEL WITH ALLOWANCE FOR SPIN SPIN TEMPERATURE. IT IS CONCLUDED THAT THE T SUBSS CONCEPT CAN BE APPLIED TO INHOMOGENEOUS EPR LINES PROVIDING CROSS RELAXATION WITHIN THE INHOMOGENEOUS LINE IS RAPID (COMPARED TO SPIN LATTICE RELAXATION). FACILITY: INSTITUT RADIOTEKHNIKI I ELEKTRONIKI AN SSSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--INTESTINAL MICROFLORA AND AUTOIMMUNE REACTIONS IN CHRONIC COLITIS
-U-
AUTHOR--(03)-ATSEROVA, I.S., MAKIYEVSKAYA, S.YE., MISAUTOVA, A.A.
COUNTRY OF INFO--USSR *A*
SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 5, PP 36-39
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PEDIATRICS, COLON, DIGESTIVE SYSTEM DISEASE, ANTIBODY,
IMMUNOLOGY

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1738 STEP NO--UR/0504/70/042/005/0036/0039
CIRC ACCESSION NO--AP0135314
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135314

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SPECIOUS SPECIFIC AND QUANTITATIVE COMPOSITION OF THE FECAL MICROFLORA IN 53 CHILDREN WITH VARIOUS CHRONIC DISEASES OF THE INTESTINE (CHRONIC COLITIS, NONSPECIFIC ULCEROUS COLITIS, FUNCTIONAL DYSKINESIA OF THE INTESTINE) WAS STUDIED. CHANGES IN THE MICROBAL FLORA OF THE FECES WERE REVEALED IN THREE FOURTHS OF THE PATIENTS AND WERE OF A STEADY NATURE INSPITE OF THE IMPROVEMENT OF THE CLINICAL COURSE OF THE DISEASE. CHANGES IN THE SPECIOUS SPECIFIC COMPOSITION OF THE FECAL MICROFLORA WERE ALMOST SIMILAR IN ALL THE THREE GROUPS OF PATIENTS: DYSBACTERIOSIS INCIDENCE AND EXTENT OF ITS MARKEDNESS WERE DIFFERENT IN ALL THE GROUPS AND WITHIN EACH GROUP OF PATIENTS. THERE WAS A DEFINITE RELATIONSHIP BETWEEN THE NATURE OF THE FECAL MICROFLORA AND THE ACCUMULATION OF ANTIMICROBAL AND ANTIINTESTINAL ANTIBODIES IN THE BLOOD SERUM IN ALL THE THREE GROUPS AND PATIENTS, FROM FUNCTIONAL DYSKINESIA TO NONSPECIFIC ULCEROUS COLITIS.

FACILITY: VIRUSO-MIKROBIOLOGICHESKAYA LABORATORIYA AND TERAPEVTICHESKOYE OTD. MOSKOVSKOGO OBLASTNOGE N I KLINICHESKOGO INSTITUTA IM. M. F. VLADIMIRSKOGO.

UNCLASSIFIED

USSR

UDC: 8.74

ATSTOPAS, F. F., ZHINTELIS, G. B.

"Problems of Realizing the Recognition Phase of a Specialized Translator"

V sb. Vychisl. tekhn. T. 2 (Computer Technology. Vol 2--collection of works), Kaunas, 1971, pp 306-319 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V1014)

Translation: The paper deals with problems of formal construction of the syntax of input languages for automated synthesis of a digital computer and organization of the recognition phase of a direct translator for languages of the above-mentioned type. The Algoritmik language developed by the authors and its realization is considered by way of example. Authors' abstract.

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USSR

UDC: 8.74

ATSTOPAS, E. F., ZHINTELIS, G. B.

"Syntax of 'Algoritmik' Language Realized on the 'Ruta-110' Digital Computer"

V sb. Vychisl. tekhnika. T. 2 (Computer Technology. Vol 2--collection of works), Kaunas, 1971, pp 299-305 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V999)

Translation: A formal description is given for the syntax of the input language "Algoritmik" which is realized on the "Ruta-110" digital computer. Authors' resumé.

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USSR

UDC: 51.621.391

ATSTOPAS, F. F., PLUKAS, K. I.

"One Method of Solving a System of Pseudo-Boolean Equations"

V. sb. Avtomatika i vychisl. tekhn. (Automation and Computer Technology--
collection of works), No 3, Vil'nyus, "Mintis", 1971, pp 173-176 (from
RZh-Kibernetika, No 11, Nov 71, Abstract No 11V563)

[No: abstract]

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USSR

UDC: 681.3.06:51

ATSTOPAS, F. F., ZHINTELIS, G. B.

"One Method of Minimizing Utilized Memory"

V sb. Avtomatika i vychisl. tekhn. (Automation and Computer Technology--collection of works), No 3, Vil'nyus, "Mintis", 1971, pp 165-171 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V956)

Translation: A method is proposed for solving the problem of minimizing utilized memory on the program flowchart level. The method has the following distinguishing features: 1) the method is a formal one and does not depend on the variance of the volumes of data blocks; 2) all calculations are done with a square matrix whose order is no greater than the number of data blocks considered; 3) the method is easily realized by both the manual method and by digital computer. Authors' abstract.

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USSR

UDC: 681.3

ATSTOPAS, F. F., PLUKAS, K. I.

"Computing the Execution Times for Micro-Operations"

V sb. Avtomatika i vychisl. tekhn. (Automation and Computer Technology--collection of works), No 3, Vil'nyus, "Mintis", 1971, pp 189-197 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V894)

Translation: The paper describes a method and algorithm for calculating all combinations of times of execution for micro-operations. The duration of a micro-operation is longer than a single execution cycle. The result is placed in the register immediately after completion of the micro-operation or after several execution cycles. The calculations are reduced to operations with matrices. Authors' abstract.

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USSR

UDC: 681.3

ATSTOPAS, F. F., PLUKAS, K. I.

"Calculation of the Fronts of Micro-Operations"

V sb. Avtomatika i vychisl. tekhn. (Automation and Computer Technology--
collection of works), No 3, Vil'nyus, "Mintis", 1971, pp 177-181 (from
RZh-Kibernetika, No 12, Dec 71, Abstract No 12V895)

Translation: Part of the procedure of minimizing microprograms by the
method of dynamic programming is calculation of the fronts of micro-
operations. A procedure is given for calculating a set of fronts of
micro-operations from the matrix of contiguity of the microprogram by
means of operations on Boolean matrices.

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USSR

UDC: 681.3

ATSTOPAS, F. F., PLUKAS, K. I.

"Computing the Minimum Matrices of a Microprogram"

V sb. Avtomatika i vychisl. tekhn. (Automation and Computer Technology--
collection of works), No 3, Vil'nyus, "Mintis", 1971, pp 183-187 (from
RZh-Kibernetika, No 12, Dec 71, Abstract No 12V893)

Translation: A procedure is given for computing the minimum matrices of
a microprogram. The method utilizes the solution of a system of linear
pseudo-Boolean equations and the sufficient conditions for carrying out
the micro-operations. Authors' abstract.

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USSR

UDC: 681.3

ATSTOPAS, E. F. BELYAUSKAS, B. B.

"Typical Structure of P-Microprograms for Some Input/Output Devices"

V sb. Avtomatika i vychisl. tekhn. (Automation and Computer Technology--collection of works), No 3, Vil'nyus, "Mintis", 1971, pp 141-146 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V892)

Translation: The paper describes typical structures of devices for input from punched tape, punchcards (from the narrow side) and magnetic tape, and also devices for output on these same media. The algorithmic structures corresponding to these P-microprograms are presented. These data can be used in structural synthesis of digital computers to systematize design. Authors' abstract.

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USSR

UDC 681.142.001:51

ATSTOPAS, F. F., PLUKAS, K. I.

"A Method of Proper Numbering of the Vertices of the Graph of a Microprogram"

Vil'nyus, Nauchnyye trudy vysshikh uchebnykh zavedeniy Lit. SSR. Avtomatika i vychislitel'naya tekhnika (Scientific Works of Institutions of Higher Education of the Lithuanian SSR. Automation and Computer Technology), No 2, 1970, "Mintis", pp 67-72

Abstract: A method is considered for correct numbering of the vertices of a finite directional graph which describes a microprogram. A peculiarity of the method is the fact that all computations relating to determining the ranks of the vertices are reduced to Boolean operations with Boolean matrices, and proper numbering of the vertices is found by means of a simple enumeration of the elements of a Boolean matrix. The proposed method is realized on a digital computer. Two illustrations, bibliography of three titles.

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USSR

UDC 681.142.001.51

ATSTOPAS, F. F., BELYAUSKAS, B. B., ZHINTELIS, G. B.

"SID -- a Formal Language for Describing the Algorithmic Structure and Dynamics of Digital Computers"

Vil'nyus, Nauchnyye trudy vysshikh uchebnykh zavedeniy Lit. SSR. Avtomatika i vychislitel'naya tekhnika (Scientific Works of Institutions of Higher Education of the Lithuanian SSR. Automation and Computer Technology), No 2, 1970, "Mintis", pp 31-65

Abstract: The authors consider the formal language SID designed for describing the algorithmic structure and dynamics of digital computers. SID is a metalanguage for systematizing the logical stage of digital computer design. The description of SID is presented by means of the Backus-Naur metalanguage. Nine illustrations, bibliography of six titles.

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USSR

UDC 681.142.001.51

ATSTOPAS, F. F., PLUKAS, K. I.

"Finding Contours and Paths in the Graph of a Microprogram"

Vil'nyus, Nauchnyye trudy vysshikh uchebnykh zavedeniy Lit. SSR. Avtomatika i vychislitel'naya tekhnika (Scientific Works of Institutions of Higher Education of the Lithuanian SSR. Automation and Computer Technology), No 2, 1970, "Mintis", pp 73-77

Abstract: The authors consider two different algorithms for computing all paths of any length from minorant to majorant. In addition, the first algorithm is used to determine arcs, and also the paths through which various elementary contours pass. In computations by the first algorithm, matrix operations are used with the matrix of connections of the graph of a microprogram; a peculiarity of the second algorithm is the fact that all computations are reduced to Boolean operations with the matrix of contiguity of the microprogram. Both algorithms are easily realized on a digital computer. Two illustrations, bibliography of three titles.

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USSR

UDC 681.142.001:51

ATSTOPAS, F. F., ZHINTELIS, G. B.

"A Matrix Method for Computing the Logical Conditions for Carrying out Micro-Operations"

Vil'nyus, Nauchnyye trudy vysshikh uchebnykh zavedeniy Lit. SSR. Avtomatika i vychislitel'naya tekhnika (Scientific Works of Institutions of Higher Education of the Lithuanian SSR. Automation and Computer Technology), No 2, 1970, "Mintis", pp 79-82

Abstract: A formal method is proposed for determining all logical conditions under which each micro-operation of a given microprogram is carried out. The computations are applicable to operations with matrices. The method is used in automated design of logic circuits. One illustration.

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USSR

UDC 681.142.001.51

ATSTOPAS, F. F., ZHINTELIS, G. B., KHOMSKIS, R. R.

"Optimizing Program Distribution in a Digital Computer Memory"

Vil'nyus, Nauchnyye trudy vysshikh uchebnykh zavedeniy Lit. SSR. Avtomatika i vychislitel'naya tekhnika (Scientific Works of Institutions of Higher Education of the Lithuanian SSR. Automation and Computer Technology), No 2, 1970, "Mintis", pp 95-98

Abstract: A formal method is proposed for initial distribution of a program in a digital computer memory. The method does not require complex computations. The procedure is as follows: 1) program blocks of a given length are formulated; 2) initial distribution of the program is implemented between the immediate-access and auxiliary memories; 3) the program blocks are arranged in the auxiliary memory in the most likely order of input into the immediate-access memory. The proposed method is realized in the form of a program. Two illustrations, bibliography of one title.

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USSR

UDC: 681.325.3

ATSYUKOVSKIY, V. A., VELIKSON, Ya. M., KULIKOV, I. V.

"A Multichannel Angle-to-Code Converter"

USSR Author's Certificate No 328493, filed 3 Jul 70, published 11 Apr 72
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 1, Jan
73, abstract No 1B471 P)

Translation: A multichannel angle-to-code converter is proposed which contains sine-cosine pickups connected through an input commutator and paraphase amplifiers to an octant commutator. The octant commutator is connected to the input of a decoding code-to-voltage converter, to the input and output of an octant register, to one of the inputs of a comparison unit, and to one of the outputs of a distributor. The second output of the distributor is connected through a control register and the decoding code-to-voltage converter to the other input of the comparison unit. The output of the comparison unit is connected to the octant register and the control register.

To increase conversion accuracy and extend functional possibilities, the converter contains a reading characteristic module, connected to the control register, and an automatic synchronization module whose inputs are connected

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ATSYUKOVSKIY, V. A., et al., USSR Author's Certificate No 328493

to the outputs of the paraphase amplifiers, while the output is connected to the input of the distributor. The multichannel angle-code converter is distinguished by the fact that the automatic synchronization module is made in the form of a summing amplifier, control element, and flip-flop connected in series.

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1/2 022 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--DIFFERENTIAL DIAGNOSIS OF ALLERGIC AFFECTIONS OF THE LUNGS -U-
AUTHOR--OYFEBAKH, M.I., ATTAROVA, I.N. A
COUNTRY OF INFO--USSR
SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 3, PP 53-55
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ALLERGIC DISEASE, LUNG, TUBERCULOSIS, DIAGNOSTIC MEDICINE

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1986/0824 STEP NO--UR/0504/70/042/003/0053/0055
CIRC ACCESSION NO--AP0102786
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102786

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DATA OF CLINICAL AND ROENTGENOLOGICAL MANIFESTATIONS OF ALLERGIC AFFECTIONS OF THE LUNGS ARE DESCRIBED IN THE ARTICLE. THE AUTHOR UNDERLINES DIAGNOSTIC DIFFICULTIES WHICH GROW IN CASES WHEN ALLERGIC CHANGES ARE COMBINED WITH TUBERCULOSIS AND WHEN RELAPSING FORMS TAKE PLACE. AT THE SAME TIME THE SIGNIFICANCE OF TIMELY DIAGNOSIS FOR THE CHOICE OF THE EFFECTIVE METHOD OF TREATMENT IS POINTED OUT.

UNCLASSIFIED